

Application No.: 10/087,116

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AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

In the claims

1. (Original) A method for reducing run out of an FDB motor during servo write, comprising the steps of:
increasing the stiffness of the FDB motor's bearings during servo write; and
decreasing the stiffness of the bearing after servo write.
2. (Original) The method of claim 1 wherein said increasing step comprises compressing the FDB motor's shaft.
3. (Original) The method of claim 2 wherein said compressing step comprises applying a compressive load to said shaft.
4. (Original) The method of claim 1 wherein said increasing step comprises increasing the rotational velocity of the FDB motor.
5. (Original) The method of claim 1 wherein said increasing step comprises significantly reducing the temperature of the FDB motor during servo write so as to increase the viscosity of the fluid of the FDB's motors bearings.
6. (Original) The method of claim 2 wherein said compressing step comprises applying a compressive load to the shaft by a means of a clamping tool abutting each end of the shaft.

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7. (Original) The method of claim 2 wherein said compressing step comprises an electromagnet mounted at one end of the rotating elements of the FDB motor that operates when actuated to reduce the gap of at least one of the FDB motor bearings.

8. (Currently Amended) Apparatus for increasing the stiffness of an FDB motor during servo write, comprising:

an FDB motor bearing having a stiffness; and
means for selectively increasing the stiffness of said bearing by applying a compressive load.

9. (Currently amended) Apparatus according to claim 8, wherein said means for selectively increasing the stiffness of said bearing comprises:

means for selectively providing ~~[[a]]~~ the compressive load on the shaft of said FDB motor.

10. (Currently amended) Apparatus according to claim 9, wherein said means for providing ~~[[a]]~~ the compressive load on said shaft comprises:

means for selectively clamping each end of said shaft.

11. (Original) Apparatus according to claim 8, wherein said means for selectively increasing the stiffness of said bearing comprises:

electromagnetic means mounted on the rotating elements of the FDB motor for attracting said rotating elements in an axial direction vis-a-vis the shaft of FDB motor.

12. (Original) Apparatus according to claim 8, wherein said means for selectively increasing the stiffness of said bearing comprises:

electromagnetic means mounted on the rotating elements of the FDB motor for attracting said rotating elements in a direction that reduces the gap of at least one of the FDB motor's bearings.

13. (Canceled)

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14. (Currently amended) Apparatus for increasing the bearing stiffness of the FDB motor during servo write, comprising:

a shaft having two ends; and
a releasable clamp abutting said two ends adapted for applying a compressive load to the shaft.

15. (Original) Apparatus according to claim 14, further including:

a disk drive casing;
at least one end of said shaft being mounted on said casing; and
said clamp abuts said casing.

16. (Original) Apparatus according to claim 12, wherein said electromagnetic means comprises:

an annular steel ring mounted on one axial end of the rotating elements of said FDB motor;
an annular U-shaped ring mounted in a fixed relationship to said rotating elements and facing said annular steel ring; and
a current bearing coil mounted in said U-shaped ring.

17. (Original) Apparatus according to claim 16, wherein said U-shaped ring it is mounted on the casing of a disk drive in which said FDB motor is mounted.

18. (Original) The method according to claim 1 wherein said FDB motor has at least one conical bearing and said method of increasing the stiffness of said FDB motor bearings includes selectively reducing the gap of said conical bearing.

19. (Original) The apparatus according to claim 8, wherein said means for selectively increasing the stiffness of said bearing comprises:

at least one conical bearing; and
means for selectively reducing the gap of said conical bearing.

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20. (Original) Apparatus according to claim 14, further comprising:
a rotating element; and
a conical bearing mounted between said shaft and said rotating element;
wherein said clamp compresses said shaft to reduce the gap of said conical bearing to
thereby increase the stiffness of said conical bearing.
21. (New) Apparatus for increasing the stiffness of an FDB motor during servo write,
comprising:
an FDB motor bearing having a stiffness; and
means for selectively increasing the stiffness of said bearing by reducing the temperature of
said FDB motor to increase the viscosity of the FDB motor's bearing fluid.

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